

EARNINGS MANAGEMENT AND FIRM SIZE: AN EMPIRICAL ANALYZE IN ALBANIAN MARKET

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Abstract

Many studies show the importance of the “earning management and its implications” and are focused mainly in developed countries. Only a few of them analyses this phenomenon in emerging countries or developing economies as it’s the case of Albania.

This study aims to:

- bring evidence and analyze earnings management initiatives in Albanian context,
- identify the relationship between earnings management and firm size,
- provide some conclusion with regard to earnings management.

Log of total assets is used as proxy for firm size, and absolute value of discretionary accruals for earnings management. Jones Model is used for calculation of discretionary accruals.

The results show that firms in the Albanian market are engaged in earnings management initiatives and there are no significant differences concerning earnings management initiatives and practices, comparing large and small size companies.

Keywords: Earnings Management, Firm Size, Albanian Market

Introduction

Annual earning measures the performance of the company during the year and is calculated as the net result of revenues and expenses for the fiscal year. Managers for various reasons can affect the outcome by intervening or "manipulating" the figures, reported. This intervention on the accounting earnings by managers is known with the term "earnings management". According to Healy and Whalen (1999:368), “*Earnings Management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers.*”

There are many motives, that drive managers to earnings management initiatives. *But how defferent companies react and how they deffer regarding to earnings management initiatives?*

Let consider certain viewpoints.

Firstly, financial statements of large companies (which fulfill the criteria of auditing financial statements) are audited by licensed external experts or large audit companies. This process can prevent earnings management initiatives that lead to distortion of financial results. Secondly, large companies may have greater reputation in the market than smaller firms, so they must take into account the costs of lost reputation , which are larger compared to smaller firms. This is a good reason for not engaging in earnings management initiatives. Thirdly, most of the large companies have consolidated structures of internal audit functions. Therefore, they are more likely to engage in earnings management initiatives than small firms are.

These considerations show that, large firms may be involved less in earnings management. On the other hand, it can be considered the contrary.

Firstly, large size companies have good relationship with auditors (clients with good reputation) and may negotiate with them, making auditing process and reports, more flexible. Secondly, managers (owners) by exercising their authority can affect the internal audit structures and can easily manage the results. Thirdly, large firms can manage earnings to reduce political risk. Finally, large size companies tend to enlarge the fiscal profits in order to increase external funding.

Summing up the above considerations, the question arises: Are there significant differences concerning earnings management initiatives, comparing large and small size companies in Albanian market?

An empirical analysis will serve to answer this question.

The content of this paper is organized as follows:

- Literature review and Hypothesis development.
- Definition of methodology and sample selection.
- Specification of the model.
- Empirical results and discussions.

Literature review and hypothesis development

- The effects of firm size on earnings management initiatives.

Many studies analyse the effects of firm size on earnings management initiatives.

Burgstahler and Dichev (1997) analyze the impact of earnings management on the company's losses, in a sample of 300 companies and the results show that large firms and small ones manage their earnings in order to avoid small losses or small profits decline. Rangan, (1998) found a significant relationship between earnings management and performance of experienced equity offerings. He suggested that older and largest firms were

maneuvering the current accruals to exaggerate the earnings of the experienced equity offerings. Degeorge, F., J. Patel, and R. Zeckhauser (1999) indicated that large companies manipulated the earnings of the company to avoid the negative earnings. Barton and Simko (2002), shows that big companies faced more influence to get the analysts' demands to manage earnings more effectively. Nelson et al. (2002) showed that sometimes auditors might ignore the earnings management of large sized firms. He argue that, since audit fees increase with client size, the probability of adjustments in the financial statements by the auditor becomes lower when increasing the client size. Ching, Firth and Rui (2002) examined that whether unrestricted current accruals forecasted the returns and earnings performance and resulted that larger firms were manipulating current accruals to overstate earnings than the small sized firms. Kim, Liu and Rhee (2003) examined the relationship between corporate earnings management and the firm size. They argue that size has a positive effect on the use of earnings management because large firms usually have strong internal control systems and governance mechanisms. Persons (1995), analysis of fraud reveals evidence of more fraudulent activity in smaller firms.

Considering the discussion above, a testable hypothesis is developed on the effect of firm size on earnings management phenomenon in Albanian Market, and it is formulated as below:

H – There are no significant differences regarding to earnings management practices comparing large and small size companies.

Methodology and sample selection

Empirical analysis is based on a valid sample of 75 firm-year observations. It considers historical data for a three-year period (2009-2011) from entities selected, mainly from the private sector.

The reason of choosing private companies is that they have greater managerial ownership, major capital providers, often have insider access to corporate information and capital providers take a more active role in management. Moreover, their financial statements are not widely distributed to the public and are more likely to be influenced by tax objectives (Ball and Shivakumar, 2005).

The selection criteria for the companies included in the sample are listed as follows:

- Companies should have financial statements for the period of 2009-2011.
- Companies with less than three years of activity are excluded from the sample.
- Consistent with previous research, firms in banking and insurance industry are excluded from the sample, because of the different industry characteristics.

Specification of the model

According to Dechow, Sloan, and Sweeney (1995), Modified Jones Model provides the most powerful test of earnings management. In addition, different authors have defined this model as an efficient tool in the detection of abnormal accruals, which shows that companies (managers) involve in earnings management practices. Based on these results Modified Jones Model is used to detect abnormal accruals, which will be used as a proxy for earnings management.

Jones Modified Model calculate the discretionary accruals (DA) or abnormal accrual (used as a proxy for earning management) as residuals from a regression of TA (expressed from the equation below)

$$DA_{it} = \frac{TA_{it}}{A_{i,t-1}} - (\beta_0 + \beta_1 t \frac{1}{A_{i,t-1}} + \beta_2 t \frac{\Delta Rev_{it} - \Delta AR_{it}}{A_{i,t-1}} + \beta_3 t \frac{PPE_{it}}{A_{i,t-1}})$$

So error term determines exactly abnormal accruals, whose absolute value is used as an indicator of "earnings management." The larger this value, lower is the quality of reported earnings.

$TA = \Delta CA_{it} - \Delta CL_{it} - \Delta Cash_{it} + \Delta STD_{it} - Dep_{it}$. This formula is used for total accruals calculation where:

- ΔCA = the change in current assets from year t-1 to t
- ΔCL = the change in current liabilities from year t-1 to t
- $\Delta Cash$ = the change in cash and cash equivalents from year t-1 to t
- ΔSTD = change in debt included in current liabilities from year t-1 to t (which in fact belongs to current liabilities but that is determined by any short-term or long-term bank loan, its repayment ends in the year t.
- Dep = depreciation and amortization expense
- $A_{i,t-1}$ = total assets in the beginning of the year
- ΔRev = change in sales from year t-1 to t
- ΔAR = change in receivable accounts from year t-1 to t
- PPE = property plant and equipment
- ε = statistical error

After defining the discretionary accruals, according to the model specified above, the regression model used for testing the hypothesis developed is as below:

$$DA_{it} = \beta_1 LnA_{i,t} + \beta_2 FL_{i,t} + \beta_3 Loss_i + \beta_4 Sales_i + \beta_5 FK_{i,t} + e_{i,t}$$

Where:

$FL_{i,t}$ = financial leverage equal to total liabilities/ total assets.

Loss i,t = dummy variable to identify negative fiscal earnings reported. Loss = 1 if the fiscal earning are negative and Loss = 0, if not.

Sales i,t = the percentage of sales growth from the previous year. This variable is set in to the model to detect the cases where firms with high growth can result in information asymmetry. These situations may lead to earnings management initiatives.

FK i,t = if the company's activity is financed by foreign capital, it will increase the demand for audit quality of financial reports. This variable will take the value 1 if the activity is partially or fully, financed by foreign capital and zero (0), if the capital is domestic.

Empirical results and discussions

The difference between total accruals scaled to total lagged assets in the beginning of the year and accruals according to Modified Jones Model, or in other words the error term (in absolute value) is the indicator used to identify "earnings management". From estimates (Table 1), these values shows that entities in the Albanian market are involved in earnings management initiatives.

Table 1: the absolute values of abnormal accruals according Jones Modified Model

firm-year observation	Abnormal Accruals (the residual) according Jones Modified Model			Absolute value of abnormal accruals		
	I	II	III	I	II	III
1	-0.09	0.24	0.1	0.09	0.24	0.1
2	-0.05	-0.14	0.66	0.05	0.14	0.66
3	-0.19	0.44	0.04	0.19	0.44	0.04
4	-0.41	0.1	-0.12	0.41	0.1	0.12
5	-0.04	0.21	-1.7	0.04	0.21	1.7
6	0.48	0	0.4	0.48	0	0.4
7	-0.35	-0.13	0.08	0.35	0.13	0.08
8	-0.31	2.68	0.14	0.31	2.68	0.14
9	0.06	-0.39	-0.1	0.06	0.39	0.1
10	-0.04	0.4	-2.96	0.04	0.4	2.96
11	0.44	0.43	0.44	0.44	0.43	0.44
12	0.08	-0.55	-0.09	0.08	0.55	0.09
13	0.56	-0.18	0.01	0.56	0.18	0.01
14	0.26	0.28	0.39	0.26	0.28	0.39
15	-0.22	-0.09	-0.4	0.22	0.09	0.4
16	-0.25	-0.12	-0.18	0.25	0.12	0.18
17	0.08	0.31	0.21	0.08	0.31	0.21
18	-0.05	-0.59	0.17	0.05	0.59	0.17
19	-0.25	0.28	0.23	0.25	0.28	0.23
20	-0.15	-0.11	-0.17	0.15	0.11	0.17
21	-0.12	-0.12	0.22	0.12	0.12	0.22
22	-0.14	-0.05	-0.66	0.14	0.05	0.66

23	0.22	0.43	0.25	0.22	0.43	0.25
24	0.23	0.24	0.2	0.23	0.24	0.2
25	0.19	0.19	0.17	0.19	0.19	0.17

The results expressed in the table 5 shows that 36 from 75 observation, which means in 48% there is income decreasing earnings management. It seems that companies mostly prefer to manage earnings upwards so, they avoid small losses and report small profits instead.

The absolute value of DA (as calculated below) is the dependent variable in the regression model, used to test the hypothesis developed above.

Table 2 provide a summary of statistics and analysis of variance, regarding the dependent variable and the other variables considered in OLS model, using 75 firm-year observations, including 25 cross-sectional units.

Table 2 (Model 1): Pooled OLS, using 75 observations

Included 25cross-sectional units

Time-series length = 3

Dependent variable: absolute value of discretionary accruals (DA)

	Coefficient	Std. Error	t-ratio	p-value	
ln_A_it	0.234624	0.0362136	6.4789	<0.00001	***
FL_i_t	-3.17215	0.570683	-5.5585	<0.00001	***
Loss_i	1.46783	0.438651	3.3462	0.00104	***
Sales	0.00043849	0.00013947	3.1452	0.00201	***
FK_i_t	-2.07952	0.475618	-4.3722	0.00002	***

Mean dependent var	0.884967	Adjusted R-squared	0.342089
Sum squared resid	609.1152	P-value(F)	5.34e-13
R-squared	0.359402	Durbin-Watson	0.170071
F(5, 147)	16.60682		

White's test for heteroskedasticity -

Null hypothesis: heteroskedasticity not present

Test statistic: LM = 104.57

with p-value = $P(\text{Chi-square}(17) > 104.57) = 1.2565\text{e-}014$

This model accounts for significantly more variance in the criterion variable than would be expected by chance, since the p value of the F (5,147) is near 0. In addition, considering the goodness of fit test, it can be observed that in the regression model, R squared value of 0.359402 shows that 35.94 % variation in earning management (Dependant Variable) is explained by Firm Size and other independent variables in the model. Furthermore, Durbin–Watson statistic used to detect the presence of autocorrelation in the residuals (prediction errors) from the regression analysis, stands less than 2 (Durbin–Watson statistic = 0.170071) indicating that there is evidence of

positive serial correlation. While the white test shows that, the heteroskedasticity is not present since p-value is near 0 (1.2565e-014).

The estimate of the slope coefficient for Ln A is 0.234624 with p value less than 0.025. Hence, there is a significant positive impact of firm size on earnings management. In addition, the coefficient for Financial Leverage is -3.17215, with p value less than 0.025. So it shows for significant negative impact on earnings management. This can be explain with the fact that, as leverage increases the creditors interest in companies' activities increases, they act as free watchdogs and look after the companies' practices related to earning management.

In addition, the estimate of the slope coefficient for Loss, if reported in the fiscal year and Sales Growth, they are 1.46783 and 0.000438489, with p -values less than 0.025, which means that they are also significant variables in the model with positive impact on earnings management.

The dummy variable of foreign capital which takes the value 1 if it is present, is also statistical significant with negative impact on earnings management. Which means that the companies with foreign capital, appears to be more careful about the earnings management practices.

To test the hypothesis developed in this paper, I have divided the observations in to small and big companies, by calculating the average of Ln Assets. Than the average of absolute value of discretionary accruals is calculated to compare big and small companies, with regard to earnings management.

The table 3 shows the statistics.

Table 3

	Small companies Ln Assets <11.84	Big companies Ln Assets >=11.84
Average of Ln Assets	11.84	
Average of DA	0.525	0.906

The larger is the absolute value of discretionary accruals, lower is the quality of reported earnings, so larger is the possibility of earnings management practices. Comparing the two groups, it is noticed that for big companies, the absolute value of discretionary accruals (according Jones Modified Model) is bigger ($0.906 > 0.525$). But how statistical important is this difference? To answer this question another dummy variable for firm size is added to the regression model.

Average LnA i,t = dummy variable which takes the value 1, if the natural logarithm of total assets stands above the average value of Ln assets, calculated for 75 firm year observations. If the values stands less than the average this variable takes the value 0.

So the regression model becomes as below:

$$DA_{it} = \beta_1 LnA_{i,t} + \beta_2 FL_{i,t} + \beta_3 Loss_i + \beta_4 Sales + \beta_5 FK_{i,t} + \beta_6 Average LnA_{i,t} + e_{i,t}$$

Table 4 provides a summary of statistics and analysis of variance regarding the above regression model.

Table 4 (Model 2): Pooled OLS, using 75 observations
Included 25 cross-sectional units
Time-series length = 3

Dependent variable: absolute value of discretionary accruals (DA)

	Coefficient	Std. Error	t-ratio	p-value	
LnA _{i,t}	0.218161	0.0375737	5.8062	<0.00001	***
FL _{i,t}	-3.32674	0.576674	-5.7689	<0.00001	***
Loss _i	1.40298	0.438582	3.1989	0.00169	***
Sales	0.00042303	0.000139118	3.0408	0.00279	***
FK _{i,t}	-2.09211	0.473446	-4.4189	0.00002	***
Average LnA _{i,t}	0.585622	0.377614	1.5508	0.12309	

Mean dependent var	0.884967	Adjusted R-squared	0.348276
Sum squared resid	599.3096	P-value(F)	7.42e-13
R-squared	0.369714	Durbin-Watson	0.187236
F(6, 147)	14.37126		

As it can be noticed the variable added has a positive impact on earnings management but, it appears not statistical significant as the p-value is greater than 0.025 and t-ratio is less than 2. So I can conclude that there are no significant differences regarding to earnings management practices, comparing large and small size companies. Thus, the hypothesis is confirmed.

Conclusions

Literature review shows the importance of the earning management and its implications, since it has been of concerned by many researchers. These studies are focused mainly in developed countries and only a few of them analyses this phenomenon in emerging countries or developing economies as it's the case of Albania. This paper investigates the earnings management initiatives in the Albanian market and its relations with firm size, and other control variables such as leverage, change in sales, foreign capital structures, the reported loss. The model is applied on a sample of 75 firm-year observations, for fiscal years 2009-2011.

Through regression model analyses, I find this characteristics:

Consistent with Burgstahler and Dichev (1997), I find that that both large- and small-sized firms manage earnings to avoid reporting small negative earnings or small earnings decreases. So firstly, there is evidence of earnings management initiatives in Albanian market and secondly, there are

no differences in regard to earnings management initiatives, where comparing large and small size companies.

The results from this study could be worthy of being generalized if a more variables are taken to study this impact because the R squared value suggests the presence of more variables that may have a significant impact on earnings management. For example, adding in the model proxies for internal and external auditor. Since the quality of reported earnings is subject of audit process, it would be of interest to analyze the relation between earnings management and internal and external audit quality, in the Albanian context.

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